

Notice of Allowability

Application No.

10/086,950

Examiner

Robert A Hopkins

Applicant(s)

OHKAWA, TIHIRO

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 2-28-02.
 2. ☒ The allowed claim(s) is/are 1-20.
 3. ☒ The drawings filed on 03 February 2003 are accepted by the Examiner.
 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
 5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
 6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**
7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
- 2 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3 ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. 6-3-02
- 4 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

- 5 ☐ Notice of Informal Patent Application (PTO-152)
- 6 ☐ Interview Summary (PTO-413), Paper No. _____
- 7 ☐ Examiner's Amendment/Comment
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

Robert A Hopkins
Primary Examiner
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DETAILED ACTION

Allowable Subject Matter

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 recites "a substrate mounted in said chamber and exposed for contact with said selected metal ions, wherein said substrate is made of a crystalline compound and wherein said crystalline compound is interactive with said selected metal ions for diffusion of said metal ions into said substrate to create a liquid therewith; and a receptacle for receiving said liquid as said liquid flows from said substrate". Tamagaki et al(5126030) discloses a container with a chamber for holding plasma, and a substrate(6) mounted in the chamber and exposed for contact with selected metal ions, however the substrate is made of a metal material(see stainless steel; column 7 lines 28-29)) instead of a crystalline material. Also Tamagaki et al discloses forming a coating on the substrate, whereas the current application discloses ions interacting with the substrate to create a liquid ,and including a receptacle for receiving the liquid, wherein Tamagaki et al fails to disclose a receptacle. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a substrate of a crystalline compound and a receptacle for receiving liquid because Tamagaki et al does not suggest such a modification. Claims 2-8 depend on claim 1 and hence are also allowed.

Claim 9 recites " a collector plate mounted in said chamber for holding a crystalline compound substrate thereon, wherein said crystalline compound is exposed

in said chamber to interact with said plasma ...; and a receptacle for receiving said liquid as said liquid flows from said substrate". Tamagaki et al(5126030) discloses a container with a chamber for holding plasma, and a substrate(6) mounted in the chamber and exposed for contact with selected metal ions, however the substrate is made of a metal material(see stainless steel; column 7 lines 28-29)) instead of a crystalline material. Also Tamagaki et al discloses forming a coating on the substrate, whereas the current application discloses ions interacting with the substrate to create a liquid ,and including a receptacle for receiving the liquid, wherein Tamagaki et al fails to disclose a receptacle. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a substrate of a crystalline compound and a receptacle for receiving liquid because Tamagaki et al does not suggest such a modification. Claims 10-15 depend on claim 9 and hence are also allowed.

Claim 16 recites "a method for removing metal ions from a plasma chamber which comprises the steps of : ... ; mounting a collector plate in said chamber for holding a crystalline compound thereon, wherein said crystalline compound is exposed in said chamber to interact with said plasma ... , and providing a receptacle for receiving said liquid as said liquid flows from said substrate". Tamagaki et al(5126030) discloses a container with a chamber for holding plasma, and a substrate(6) mounted in the chamber and exposed for contact with selected metal ions, however the substrate is made of a metal material(see stainless steel; column 7 lines 28-29)) instead of a crystalline material. Also Tamagaki et al discloses forming a coating on the substrate, whereas the current application discloses ions interacting with the substrate to create a

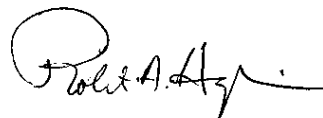
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liquid ,and including a receptacle for receiving the liquid, wherein Tamagaki et al fails to disclose a receptacle. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a substrate of a crystalline compound and a receptacle for receiving liquid because Tamagaki et al does not suggest such a modification. Claims 17-20 depend on claim 16 and hence are also allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday 9:00am-4:00pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.



Robert A Hopkins
Primary Examiner
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Rah
December 23, 2003

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."